

Detailed program

Status: March 26, 2018

Monday, June 18, 2018

7:00–8:00	Registration for workshop and conference "Membrane technology and testing" at Hotel Westin Bellevue		
8:00–10:00	Bus transfer to Fraunhofer IKTS in Hermsdorf		
10:00–16:00	Workshop "Membrane technology and testing" at Fraunhofer IKTS in Hermsdorf, H. Richter et al. (Fraunhofer IKTS, DE)		
10:00–10:20	Welcome Coffee at Fraunhofer IKTS, Hermsdorf		
10:20–10:45	Fraunhofer IKTS - Introduction I. Voigt (Fraunhofer IKTS)		
10:45–12:00	Workshop Part 1 (in group rotation)		
	Tubular supports. (extrusion, tubes, capillaries, high temperature firing)	Flat supports, coating and characterisation. (tape casting, sol.gel coating, REM, Hg-porosimetry, N ₂ sorption, XRD)	Membrane testing and pilot production. (liquid filtration, pervaporation, gas permeation, lab and pilot scale testing)
12:00–13:00	Lunch break		
13:00–14:15	Workshop Part 2 (in group rotation)		
	Membrane testing and pilot production. (liquid filtration, pervaporation, gas permeation, lab and pilot scale testing)	Tubular supports. (extrusion, tubes, capillaries, high temperature firing)	Flat supports, coating and characterisation. (tape casting, sol.gel coating, REM, Hg-porosimetry, N ₂ sorption, XRD)
14:15–15:30	Workshop Part 3 (in group rotation)		
	Flat supports, coating and characterisation. (tape casting, sol.gel coating, REM, Hg-porosimetry, N ₂ sorption, XRD)	Membrane testing and pilot production. (liquid filtration, pervaporation, gas permeation, lab and pilot scale testing)	Tubular supports. (extrusion, tubes, capillaries, high temperature firing)
15:30–16:00	Closing of the workshop		
16:00–18:00	Bus transfer to Hotel Westin Bellevue		
16:00–20:00	Registration for conference at Hotel Westin Bellevue		
18:00–20:00	Welcome reception at Hotel Westin Bellevue		

Tuesday, June 19, 2018

9:00–9:40	Grand opening		
9:40–10:30	Plenary speech Smart solutions for climate protection R. Kleinschmidt (Innovation division of Thyssenkrupp Industrial Solutions, DE)		
10:30–11:00	Coffee break		
11:00–11:50	Plenary speech D. Scholl (Georgia Institute of Technology, Atlanta, GA, US)		
11:50–12:30	Plenary speech Advanced ion-transport materials for application in membranes and fuel cells J. Serra (Polytechnic University of Valencia, ES)		
12:30–14:00	Lunch break		
14:00–16:00	Zeolite membranes 1 Session Chair: N.N.	Oxygen transport membranes 1 Session Chair: J. Lin (Arizona State University, US)	Characterisation and modeling Session Chair: R. Noble (University of Colorado, US)
14:00–14:30	Directly-synthesized high-aspect-ratio zeolite MFI nanosheets for membrane separation applications M. Tsapatsis (University of Minnesota, US)	Asymmetric membranes S. Baumann (Forschungszentrum Jülich GmbH, DE)	Acoustic emission monitoring: a novel diagnostic tool for the characterization of porous ceramic membranes during gas permeation A. Julbe (University of Montpellier, FR)
14:30–14:50	Tailoring the intracrystalline structure of b-oriented silicalite-1 zeolite film X. Wang (TU Delft, NL)	Chemical and morphological stability of oxygen transport membranes in 4-end oxyfuel processes M. Schroeder (RWTH Aachen, DE)	Single pore engineering and measurement of permeation rates via visualisation G. Mutch (Newcastle University, UK)
14:50–15:10	Fast preparation of oriented silicalite-1 membranes for butane isomer separation by microwave heating R. F. Zhou (Nanjing Tech University, CN)	MIEC membranes for intensified combustion and carbon capture M. Bernhardt (Fraunhofer IKTS, DE)	Study of 3D porous structure of non-oxide membranes by X-ray tomography and impact of such structure on water transport S. Masson (University of Montpellier, FR)
15:10–15:30	Improvement of gas permeance through MFI zeolite membranes prepared on porous silica substrates M. Nomura (Shibaura Institute of Technology, JP)	MIEC hollow fiber membranes in a plasma atmosphere Th. Schiestel (Fraunhofer IGB, DE)	Simulation and modeling of water permeation in TiO ₂ nanoporous membranes using non-equilibrium molecular dynamics T. Yoshioka (Kobe University, JP)
15:30–15:50	Exfoliated monolayer WS ₂ nanosheets for healing intercrystalline defects of zeolite membrane Y.-T. Zhang (Nanjing Tech University, CN)	Performance and long term stability of asymmetric La _{0.6} Sr _{0.4} CO _{0.2} Fe _{0.8} O _{3-δ} membranes in CO ₂ -rich atmosphere F. Drago (Ricerca sul Sistema Energetico S.p.A, IT)	Porous media flow – flow simulation in the design process of ceramic membrane elements for cross-flow filtration M. Stahn (Fraunhofer IKTS, DE)
15:50–16:10	Our recent progress on preparation and applications of zeolite membranes X. H. Gu (Nanjing Tech University, CN)	Perovskite membranes with enhanced stability by atomic layer deposition of metal oxide nanofilm G. Zhang (Nanjing Tech University, CN)	A methodology for the evaluation of membrane robustness and lifetime Ch. Goebbert (Nanostone Water GmbH, DE)
16:10–16:40	Coffee break		
16:40–18:50	Zeolite membranes 2 Session Chair: M. Tsapatsis (University of Minnesota, US)	Oxygen Transport membranes 2 Session Chair: R. Bredesen (SINTEF Materials and Chemistry, NO)	Transport and application Session Chair: R. Bhavé (Oak Ridge National Laboratory, US)
16:40–17:10	Preparation and permeation properties of CHA and AEI zeolite membranes H. Kita (Yamaguchi University, JP)	Ceramic composite membranes for oxygen separation: a short review on recent developments and challenges W.-R. Kiebach (Technical University of Denmark, DK)	Consideration of the Joule-Thomson-effect for the transport of vapor through anodic alumina membranes under conditions of capillary condensation Th. Loimer (Technische Universität Wien, AT)
17:10–17:30	DDR zeolite membrane: the recent development for practical use in CO ₂ -EOR field J. Okazaki (JGC Corporation, JP)	Highly stable cobalt-free dual-phase oxygen transporting membrane in the intermediate-low temperature range F. Liang (Chinese Academy of Sciences, CN)	Experimental study of membrane distillation using ceramic membranes K. Milew (Technische Universität Bergakademie Freiberg, DE)
17:30–17:50	An oriented and all-silica DDR structure zeolite membrane for effective post-combustion carbon capture Y. Jeong (Korea University, KR)	Performance of mixed conducting membranes under reaction/separation/reaction conditions H. Jiang (Chinese Academy of Sciences, CN)	Novel percrystallization inorganic membrane J. da Costa (The University of Queensland, AU)
17:50–18:10	Preparation of SAPO-34 hollow fibers for gas enrichment P. Lee (Chung-Ang University, KR)	Dual-phase membranes for oxygen separation X. Zhu (Chinese Academy of Sciences, CN)	Gas separation by interfacial diffusion membranes D. Wang (The University of Sydney, AU)
18:10–18:30	Preparation of Ag-*BEA membrane for olefin/paraffin separation M. Sakai (WASEDA University, JP)		Purification of cellulase fermentation broth via ceramic microfiltration membranes with with a separation layer of attapulgite nanofibers M. S. Li (Huaiyin Normal University, CN)
18:30–18:50	Synthesis and pervaporative solvent dehydration behavior of mordenite zeolite composite membranes having controlled microstructure C.-H. Cho (Chungnam National University, KR)	OTMs surface modification by means of dual-phase materials deposition: Oxygen permeation optimization under oxyfuel environments J. Garcia-Fayos (Instituto de Tecnología Química (UPV-CSIC), ES)	New membrane applications in liquid and gas separation Ch. Günther (Rauschert Kloster Veilsdorf GmbH, DE)
19:00–22:00	Poster Session/Get together		

Wednesday, June 20, 2018			
8:30–10:40	Metal-organic frameworks 1 Session Chair: J. Caro (University of Hannover, DE)	Proton conducting membranes Session Chair: M.-L. Fontaine (SINTEF Materials and Chemistry, NO)	Application 1 Session Chair: S. D. Hopkins (PALL Corporation, US)
8:30–9:00	Microstructural engineering and architectural design of metal-organic framework membranes W. S. Yang (Chinese Academy of Sciences, CN)	Lanthanum tungstate based membranes for H₂ extraction and CO₂ utilization: fabrication strategies M. E. Ivanova (F. Z. Jühlich, DE)	Hybrid water treatment of multi-channel alumina microfiltration and polypropylene beads with air back-flushing: roles of adsorption, photo-oxidation, and PP beads J. Y. Park (Hallym University, KR)
9:00–9:20	Seeding-free aqueous synthesis of crystal-size-engineered ZIF-8 MOF membranes S. Tanaka (Kansai University, JP)	Co-adsorption of H₂O and CO₂ on BaZrO₃-based proton-conducting electrolytes J. Polfus (SINTEF Materials and Chemistry, NO)	Direct filtration of municipal wastewater using flat-sheet ceramic membrane X. Li (The University of Hong Kong, CN)
9:20–9:40	Fabrication of ZIF-8 membranes by solvent-free transformation of spray-coated ZnO layers B. Reif (Friedrich-Alexander-University Erlangen-Nürnberg, DE)	Influence of A-site defect on stability and hydrogen permeation property of Ba_{1-x}Zr_xCe_{0.7}Y_{0.2}O_{3-δ} (x=0.5) C. Yan (Shanghai Normal University, CN)	Application of flat-sheet ceramic membrane in combined processes for potable reuse of reclaimed domestic wastewater X. Zhang (Tsinghua University, CN)
9:40–10:00	Toward high-throughput ZIF-8 membranes on scalable supports for propylene/propane separation H.-K. Jeong (Texas A&M Engineering Building, QA)	Formation and electrical properties of the heterosystems with proton conducting thin-film La_{0.95}Sm_{0.05}ScO_{3-δ} electrolyte A. Kuzmin (Russian Academy of Sciences, RU)	Novel MBR coupled with ceramic UF membrane filtration and in-situ ozonation for wastewater treatment Z. Zhang (Tsinghua University, CN)
10:00–10:20	A novel route for crystallization of highly-intergrown metal-organic framework membranes for gas separation K. Varoon Agrawal (École Polytechnique Fédérale de Lausanne, CH)	Doped barium zirconate thin-film electrolyte for high temperature Proton Conducting Cells (PCCs) F. Han (German Aerospace Center DLR, DE)	Suppression of membrane fouling in the ceramic membrane bioreactor (C-MBR) by minute electric field W.-T. Shang (Shenzhen Key Laboratory, CN)
10:20–10:40		Scaling up of tubular proton ceramic electrolyzers M.-L. Fontaine (SINTEF Materials and Chemistry, NO)	Influence of water quality on virus removal by a novel N-doped TiO₂-coated Al₂O₃ ceramic membrane Th. Luxbacher (Anton Paar GmbH, AT)
10:40–11:10	Coffee break		
11:10–13:20	Metal-organic frameworks 2 Session Chair: W. Yang (Dalian Institute of Chemical Physics, CN)	Electrochemical devices 1 Session Chair: L. Singheiser (Forschungszentrum Jülich GmbH, DE)	Application 2 Session Chair: A. Nijmeijer (Shell, NL)
11:10–11:40	MOF-based membrane encapsulated ZnO nanowires for enhanced gas sensor selectivity M. Drobek (Université de Montpellier, FR)	"Uphill" permeation of CO₂ from dilute gas streams in a leak free laser-drilled dual phase molten salt-ceramic membrane I. S. Metcalfe (Newcastle University, UK)	Process intensification of liquid-phase reactions using ceramic membranes A. Buekenhoudt (VITO NV – HQ, BE)
11:40–12:00	Inner metal-organic framework hollow fiber membranes for gas separation K. Huang (Newcastle University, UK)	Effect of the composition of Cu-electrodes fabricated by electroless plating on the galvanic hydrogen pumping through proton-conducting ceramic membranes	Application of ceramic nanofiltration membranes for water treatment in oil sands mines S. Motta (University of Twente, NL)
12:00–12:20	LDH-assisted fabrication of high quality MOF layers for efficient gas separation and anti-corrosion Y. Liu (DUT, CN)	Glassy and glass-ceramic materials for anodes of lithium-ion batteries based on SnO₂-MoO₃ system A. Raskovalov (Institute of High-Temperature Electrochemistry of UB of RAS, RU)	Inorganic membranes for drying of critical ethanol mixtures M. Weyd (Fraunhofer IKTS, DE)
12:20–12:40	Two-dimensional metal-organic framework nanosheets membranes for H₂/CO₂ separation Y. Peng (Dalian Institute of Chemical Physics, CN)	Evaluating proton uptake in mixed ionic/electronic conducting air electrode materials for electrochemical devices K. Leonard (Kyushu University Motooka, JP)	Performance evaluation of different inorganic membranes in dehydrating ethanol for PGX Technology J. Mahmoudi (Ceapro INC., Canada)
12:40–13:00	Structural modification techniques for tailoring ZIFs for gas separation: a computational study P. Krokidas (Texas A&M Engineering Building, QA)	NASICON-type Li_{1.5}Al_{0.5}Ti_{1.5}P₃O₁₂ electrolyte sheets prepared by tape-casting and modification of the grain boundaries with sintering additives E. Dashjav (Forschungszentrum Jülich GmbH, DE)	Experiences with an pervaporation process for drying of natural gas U. Lubenau (DBI Gas- und Umwelttechnik GmbH, DE)
13:00–13:20	Fine-tuning of pore structures of molecular sieve membranes and their CO₂ separation properties Y. Ban (Chinese Academy of Sciences, CN)		Study of vapor capillary condensation in symmetric and asymmetric nanoporous membranes and treatment of associated petroleum gas via capillary condensation technique D. Petukhov (M. V. Lomonosov Moscow State University, RU)
13:20–14:15	Lunch break		
15:00–18:00	Cultural program		
19:00–22:00	Dinner international conference committee		

Thursday, June 21, 2018			
8:00–10:10	Graphene-based membranes Session Chair: K. Li (Imperial College London, UK)	Electrochemical devices 2 Session Chair: J. Serra (University of Queensland, AUS)	Ceramic membranes Session Chair: A. Ayril (University of Montpellier, FR)
8:00–8:30	Two-dimensional-material membranes for molecular and ionic separation W. Jin (Nanjing Tech University, CN)	Intermediate temperature steam electrolysis using proton conducting perovskites membrane H. Matsumoto (Kyushu University, JP)	Nano and macro porous membranes à la carte M. Lelonek (SmartMembranes GmbH, DE)
8:30–8:50	Molecular sieving graphene-based membranes produced by dip-coating T. van Gestel (F. Z. Jühlich, DE)	Interactions between forsterite support material and LSM cathode during co-sintering of an all-ceramic SOFC S. Harboe (F. Z. Jühlich, DE)	Preparation and properties of porous attapulgite clay ceramic membrane support Z. R. Fan (Huaiyin Normal University, CN)
8:50–9:10	Natural and synthetic branched cross-linkers for graphene oxide membranes V. Boffa (Aalborg Universitet, DK)	High-performance micro-monolith solid oxide fuel cells (SOFC) T. Li (Imperial College London, UK)	Micro-channeled MgO tubular supports for asymmetric oxygen transport membranes Y. Liu (Technische Universiteit Eindhoven, NL)
9:10–9:30	Highly efficient molecular sieving from chemically modified 2D-materials L. Ries (University of Montpellier, FR)	Microchanneled ceramic membrane as a cathode support of solid oxide electrolysis cell D. Dong (University of Jinan, CN)	One-step thermal processing of high-performance perovskite hollow fibers Z. Liu (Nanjing Tech University, CN)
9:30–9:50	Pristine graphene membranes supported on ceramic hollow fibre prepared via a sacrificial layer approach Y. Chi (Imperial College London, UK)	Reduction of sintering temperature of 8YSZ by iron doping for a cost-efficient all-ceramic SOFC concept F. Grimm (Forschungszentrum Jülich GmbH, DE)	Microstructure adjustment of ceramic hollow fiber membrane by controlling spinning conditions G. Liu (Nanjing Tech University, CN)
9:50–10:10	Development of GO-based membranes for effective radionuclide removal X.-L. Zhang (Jiangxi Normal University, CN)	Reactive electrochemical membranes for degradation of pharmaceuticals by anodic oxidation S. Cerneaux (University of Montpellier, FR)	Game-changer in inorganic membranes Ph. Lescoche (TAMI Industries, FR)
10:10–10:40 Coffee break			
10:40–12:50	Carbone-based membranes 1 Session Chair: H. Richter (Fraunhofer IKTS, DE)	Palladium-based membranes Session Chair: J. Vente (Energy research Centre of the Netherlands)	Microfiltration/Ultrafiltration membranes Session Chair: A. Buekenhoudt (VITO NV – HQ, BE)
10:40–11:10	Carbon nitride nanotube membranes D. Mattia (University of Bath, UK)	High-temperature studies on thin-layered Pd alloy membranes A. Goldbach (Chinese Academy of Sciences, CN)	Hybrid organic-inorganic biomimetic membranes M. Barboiu (University of Montpellier, FR)
11:10–11:30	Carbon molecular sieve hollow fiber membranes for H₂ purification and CO₂ capture: Effect of hollow fiber module H.-H. Chen (National Chung Hsing University, TW)	Highly sulfur-tolerant Pd composite membranes with a protective layer of MoS₂/γ-alumina H. Li (Chinese Academy of Sciences, CN)	Elaboration and characterization of flat ceramic microfiltration membrane made from natural phosphate and phosphogypsum A. Younsi (University Hassan II of Casablanca, MA)
11:30–11:50	On the use of carbon molecular sieve membranes for OCM product separation J. Medrano (Eindhoven University of Technology, NL)	High capacity device for hydrogen separation from gas mixture of H₂ + N₂, using vanadium alloy membrane C. Nishimura (National Institute for Materials Science, JP)	Porous ceramic membranes prepared by low-cost materials for microfiltration J. Ha (Korea Institute of Materials Science, KR)
11:50–12:10	Carbon molecular sieve membranes for hydrogen separation M. A. Lloza Tanco (TECNALIA, ES)	The effect of the porous support in the hydrogen permeation properties of thin Pd-Ag supported membranes D. A. Pacheco Tanaka (TECNALIA, ES)	PVDF/palygorskite nanocomposite ultrafiltration membranes with enhanced flux and antifouling properties S. Y. Zhou (Huaiyin Normal University, CN)
12:10–12:30	Carbon molecular sieve membrane-based reactive separations for power generation applications H. Chen (University of Southern California, US)	Hydrogen permeation in selective vanadium-based multi-layered membranes prepared by high power impulse magnetron sputtering S. Barison (The National Research Council, IT)	Tape cast porous mullite membranes based on alumina/aluminum precursors and polysiloxane R. Nishihara (Federal University of Santa Catarina, BR)
12:30–12:50	Layers of carbon nanotubes and fibres on porous ceramic substrates for membrane application A. Simon (Fraunhofer IKTS, DE)	Palladium membranes – from innovation to industrial application T. Peters (SINTEF Materials and Chemistry, NO)	Performance of clay-alumina membrane modules after 15 years S. Bandyopadhyay (CSIR-Central Glass & Ceramic Research Institute, IN)
12:50–13:50 Lunch break			
13:50–15:40	PhD student speech competition PhD: Membrane application Session Chair: M. Barboiu (European Institute of Membranes - IEM)	PhD: Modeling and characterization Session Chair: I. Voigt (Fraunhofer IKTS, DE)	PhD: Membrane preparation Session Chair: W.A. Meulenber (Forschungszentrum Jülich GmbH, DE)
13:50–14:05	Direct filtration of municipal wastewater using flat-sheet ceramic membrane P. Li (The University of Hong Kong, CN)	Predicting the rejection of anions by ceramic nanofiltration with Debye ratio I. Caltran (TU Delft, NL)	Hierarchically porous multilayer TiO₂ membranes: Fabrication and characterization M. Buldu (The Scientific and Technological Research Council of Turkey, TR)
14:05–14:20	Separation of nutritionally valuable components from brewer's spent grain using membrane filtration F. Grahl (Technische Universität Bergakademie Freiberg, DE)	A mass transport model for organic solvent nanofiltration K. Lechner (TU Berlin, DE)	Float casting for preparation of bicontinuous metal organic framework membranes P. Tonn (Technische Universität Chemnitz, DE)
14:20–14:35	Towards an efficient membrane for fatty acid separation I. Eyskens (VITO NV – HQ, BE)	Phase transitions and structural stability of Pr₂(2-x)NiO_{4±δ}, explored by in-situ X-ray and neutron diffraction D. Ning (Helmholtz-Zentrum Berlin, DE)	Sonochemical fabrication of four metal-organic frameworks films on metal substrates O. Abuzalat (University of Calgary, CA)
14:35–14:50	Hydrophobic ceramic membranes for MD – A systematic evaluation of membrane properties on membrane performance J. Schnittger (Fraunhofer IKTS, DE)	The influence of the microstructure of membrane supports on the flux U. V. Unjie (Forschungszentrum Jülich GmbH, DE)	New avenues for the fabrication of zeolite membranes P. Karakiliç (University of Twente, NL)
14:50–15:05	Study of MIEC membranes for its application in an OCM membrane reactor L. Cruellas (Eindhoven University of Technology, NL)	Modeling of natural gas reforming using proton-conducting membrane reactors to produce pressurized hydrogen D. Catalán-Martínez (Universitat Politècnica de València, ES)	Modification of ZIF-8 membranes to enhance separation performance by membrane surface ligand exchange J. B. James (Arizona State University, US)
15:05–15:20	CO₂ tolerant oxygen selective membranes for OCM membrane reactor N. Badiola (Eindhoven University of Technology, NL)	Qualitative and quantitative analysis of 3-dimensional defects in MFI membranes by fluorescence confocal optical microscopy S. Hong (Korea University, KR)	Development of a chemically stable carbonate-ceramic membrane for CO₂ separation in water-gas-shift reactors U. Gude (Forschungszentrum Jülich GmbH, DE)
15:20–15:35	Synthesis procedure and solution composition effect on the successful synthesis of DD3R zeolite membrane M. Javad Vaezi (Sahand University of Technology, IR)	CFD simulation of hollow fiber-supported NaA zeolite membrane module J. C. Wang (Nanjing Tech University, CN)	BSCF 19-bore hollow fiber membranes with superb mechanical strength and excellent oxygen permeation fluxes T. Wang (Nanjing Tech University, CN)
15:35–15:40	Development of a hydrogen impurity enrichment device using Pd alloy membranes to support the growing hydrogen economy M. Plunkett (Imperial College London, UK)	Investigation of carbon membrane swelling in high pressure gas separation N. Kruse (Technische Hochschule Köln, DE)	Modification of PSS supports by the incorporation of CeO₂ particles to promote a completely defect-free Pd-layer by electroless pore-plating D. Martínez-Díaz (University Rey Juan Carlos, ES)
15:40–16:00 Coffee break			
16:00–18:10	Carbone-based membranes 2 Session Chair: D. Mattia (University of Bath, UK)	Membrane reactors 1 Session Chair: R. Dittmeyer (Karlsruhe Institute of Technology, DE)	Nanofiltration membranes Session Chair: T. Tsuru (Hiroshima University, JP)
16:00–16:30	Application of two-dimensional MXene membrane in separation H. Wang (South China University of Technology, CN)	Self pressurizing combustion for a more efficient energy production R. Kriegel (Fraunhofer IKTS, DE)	High-performance ceramic supported thin film composite membrane for organic solvent nanofiltration J. R. McCutcheon (University of Connecticut, US)
16:30–16:50	2D niobium oxide nanosheet membranes for water treatment: effects of nanosheet preparation methods on their membrane performances K. Nakagawa (Kobe University, JP)	Co-splitting H₂O and CO₂ on a surface catalyzed oxygen permeable membrane reactor X. Wu (Massachusetts Institute of Technology, US)	Synthesis of ceramic nanofiltration membranes for water treatment using atomic layer deposition R. Shang (TU Delft, NL)
16:50–17:10	Preparation of supported carbon molecular sieve membrane on alumina hollow fiber for propylene/propane separation K. Seong-Joong (Korea Research Institute of Chemical and Technology, KR)	An innovative plasma multi-layered photo-electrochemical cell for water splitting S. Roualdès (University of Montpellier, FR)	Novel control method of molecular weight cut-off (MWCO) during the preparation of ceramic nanofiltration (NF) membranes Y. K. Chung (Korea Advanced Institute of Science and Technology, KR)
17:10–17:30	Influence of post-treatment on gas separation performance of carbon membranes N. Reger-Wagner (Fraunhofer IKTS, DE)	Experimental and simulation study of membrane reactor for methanol synthesis using ZSM-5 zeolite membrane M. Matsukata (WASEDA University, JP)	Layer by layer design of acid resistant NF/RO membranes from UF tubular ceramic support J. Kamp (RWTH Aachen, DE)
17:30–17:50	Polyvinyl alcohol-sulfosuccinic acid-sulfonated arc discharge carbon nanotube (PVA-SSA-SACNT) membranes for polymer electrolyte membrane fuel cells (PEMFC) R. Vani (Indian Institute of Technology, IN)	Development of a microsieve based micro contactor for gas/liquid phase separation K. Dyrda (Karlsruher Institut für Technologie, DE)	Growing to shrink: polymer brushes inside mesoporous γ-Al₂O₃ L. Winnubst (University of Twente, NL)
17:50–18:10	Synthesis of a novel monolithic gas diffusion electrode based on PTFE/CB composite for proton exchange membrane fuel cell K. Sruthi (Indian Institute of Technology, IN)		Organomagnesium halides functionalized titania: toward a versatile platform of hybrid ceramic membranes M. Dorbec (VITO NV – HQ, BE)
20:00–23:00 Conference Dinner			

Friday, June 22, 2018			
8:30–10:40	Silicon carbide membranes Session Chair: A. Julbe (University of Montpellier, FR)	Membrane reactors 2 Session Chair: T. Tsotsis (University of Southern California, US)	Silica membranes Session Chair: J. da Costa (University of Queensland, AUS)
8:30–9:00	Filtration of oily water using ceramic membranes: Effect of membrane materials and pore sizes T. Tsuru (Hiroshima University, JP)	Operation of small scale membrane reactors with CVD silica membranes for MCH dehydrogenation reaction S.-I. Nakao (Research Institute of Innovative Technology for the Earth, JP)	Silica membranes for selective separation of small gasses under hydrothermal conditions M. Luiten-Olieman (University of Twente, NL)
9:00–9:20	Microporous SiC and SiCN membranes for gas separation in harsh conditions H. Richter (Fraunhofer IKTS, DE)	Titanium-based oxygen transporting membrane reactor G. He (Forschungszentrum Jülich GmbH, DE)	Recycling of organics via HybSi® dehydration membranes H. van Veen (Energy research Centre of the Netherlands, NL)
9:20–9:40	Silicon carbide membranes for gas separation applications B. Nguyen (University of Southern California, US)	Co-Production of hydrogen and carbon nanotubes by syngas reforming in a high temperature membrane reactor J. Dong (University of Cincinnati, US)	Preparation and characterization of TiO₂-doped hydrothermally stable organosilica membranes T. Kurt (Ankara University, TR)
9:40–10:00	Concept for cost-effective flat membranes made of silicon carbide based filter material J. Adler (Fraunhofer IKTS, DE)	Process intensification for "green" hydrogen production E. Palo (KT – Kinetics Technology SpA, IT)	Fabrication and characterization of metal-doped microporous organosilica membranes with high-flux for desalination X.-L. Zhang (Jiangxi Normal University, CN)
10:00–10:20	Water treatment with dead-end recrystallized silicon carbide filters A. Rubio (Compagnie de Saint-Gobain, FR)	Ceramic membrane reactors for the synthesis of methane and methanol J. Richter (Fraunhofer IKTS, DE)	Nanoporous silica aerogel membranes for CO₂ capture Y.-F. Lin (Chung Yuan University, TW)
10:20–10:40	Porous liquid phase sintered silicon carbide ceramics as alternative for recrystallised SiC in membrane application U. Petasch (Fraunhofer IKTS, DE)	Biological nitrogen removal in an algal-bacterial membrane coupled photo-sequencing batch reactor (MPSBR) G. Chen (Tsinghua University, CN)	Atmospheric-pressure plasma-enhanced CVD for low-temperature rapid synthesis of silica membranes H. Nagasawa (Hiroshima University, JP)
10:40–11:10	Coffee break		
11:10–13:20	Burggraaf honory session, Chairs: L. Winnubst, A. Nijmeijer, H. Bouwmeester		
11:10–11:20	Introduction L. Winnubst (University of Twente, The Netherlands)		
11:20–12:00	Microporous inorganic membranes, from lab to fab R. S. A. de Lange (Pervatech B.V., NL)		
12:00–12:40	Ionic transport membranes J. Y. S. Lin (Arizona State University, US)		
12:40–13:20	Inorganic membranes in reactor and water purification Applications V. T. Zaspalis (Aristotle University of Thessaloniki, GR)		
13:20–13:40	Closing ceremony		
13:40–14:40	Lunch break		